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08/548,418	10/26/95	MIZUGUGI T	8378.52F01

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EXAMINER	
GRIFFIN, S	
ART UNIT	PAPER NUMBER
1303	19

DATE MAILED: 06/25/96

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

A shortened statutory period for response to this action is set to expire three months(s), or thirty days, whichever is longer, from the date of this communication.

Office Action Summary	Application No. 08/548,418	Applicant(s) Mizusugi et al.
	Examiner Steven P. Griffin	Group Art Unit 1303

☒ Responsive to communication(s) filed on *Oct 26, 1995*.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-9* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-9* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☒ received in Application No. (Series Code/Serial Number) *08/204,536*.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Specification

1. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112, first paragraph, as the specification, as originally filed, does not provide support for the invention as is now claimed.

Claims 1 and 4, the specification as originally filed fails to provide basis for a specifically reciting "while said ring mold is stationary". Claim 4, the specification as originally filed fails to provide basis for a specifically reciting "planar ring mold". Claim 6, the specification as originally filed fails to provide for "gradually" bending the glass sheet. Claim 9, the specification as originally filed fails to provide for the ring mold to define an open center portion below the central shaping surface area. [*If applicant believes that basis is provided in the specification as originally filed for any of the above elements it is requested that the specific page and line number be provided so the Examiner can evaluate this to see if basis is*

provided.]

Claim Rejections - 35 USC § 112

2. Claims 1-9 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

3. Claims 4, 5, 7, and 8 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 is rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential steps as claim 4 states that it is claiming a method of shaping a glass sheet on a ring mold but fails to provide any positive steps of shaping the glass sheet, such omission amounting to a gap between the steps. See MPEP § 706.03(f). Claim 4, lines 1-2, recites "method of shaping a planar glass sheet of glass on a planar ring mold" but it is considered that this is indefinite as the sheet during shaping would appear to not be shaped "on" the ring mold as this recitation suggests, it appears that the sheet will be shaped by the shaping surface areas of the suction mold if a shaping step was recited. Claim 4, line 3, "the shaping surface areas" lacks antecedent basis.

Claim 5, lines 4-6, recites "and said opposite side areas of

the sheet of glass are bent toward the curved shaping surface areas" which is indefinite as it has not been positively recited that the glass sheet is bent, to overcome this it is suggested that --and bend-- be inserted after "attract" in claim 2, line 12 and "bent toward" in claim 5, line 5 be changed to --attracted and bent against--.

Claim 7, lines 1-2, "said shaping surfaces" lacks antecedent basis, basis is provided for --said shaping surface areas--.

Claim 8, lines 2-3, the recitation "attracting to said suction chambers" renders to the claim indefinite as it has not been recited that the glass sheet is attracted to the suction chambers, it is suggested that "to said suction chambers" be changed to --it against the shaping surface areas--.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention

were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

5. Claims 1, 2, and 4-9 are rejected under 35 U.S.C. § 103 as being unpatentable over Seymour 4,229,200 in view of McMaster 4,609,391.

Regarding claims 1, 2, and 5, Seymour essentially discloses the claimed method; see col. 11, line 57 to col. 12, line 31. McMaster discloses a method for bending glass plates wherein a heated glass sheet (G) is placed onto a ring mold (42) and then the ring mold with the glass plate is moved beneath a suction mold (5) wherein the mold attracts the glass plate by suction and bends the glass plate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a ring mold for transferring the heated glass sheet under the suction mold as in McMaster in order to provide for an efficient means for moving the heated glass sheet under the bending suction mold. Further regarding claims 4 and 8, Seymour also discloses using a planar ring 102 for moving the sheets toward a stationary vacuum mold and the glass sheet is clearly

seen as being planar prior to attraction (see Figs. 16-17). Therefore it is considered that it would have been obvious to one of ordinary skill in the art that the ring mold of McMaster could have been any shape such as planar or be curved with the reasonable expectation of the apparatus shaping the glass sheet on the vacuum mold of Seymour in order to produce a curved glass sheet. Further in this regard it is considered that the shape of the ring mold is an obvious engineering design choice in view of a lack of any unexpected results or criticalities resulting from the ring mold being a planar shaped mold. Regarding claim 6, the sheet of Seymour is bent from the central region of the sheet to the side areas of the sheet. Regarding claim 7, Seymour discloses using a stretchable fabric covering such as a knit fiber glass fabric on the shaping surfaces to protect surface of the glass sheets (see col. 5, lines 50-55). Regarding claim 9, it is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made that the ring mold would have an open center portion below the central shaping area as it is known that ring molds are open in the center of the mold and as such this defined open center would be have been inherently obvious to any one skilled in the art.

6. Claims 1, 2, and 4-9 are rejected under 35 U.S.C. § 103 as being unpatentable over Seymour in view of Kuster et al. 4,859,225.

Regarding claims 1, 2, and 5, Seymour is applied as above. Kuster '225 discloses a method for bending glass plates wherein a heated glass sheet (9) is placed onto a ring mold (33) and then the ring mold with the glass plate is moved beneath a suction mold (5) wherein the mold attracts the glass plate by suction and bends the glass plate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a ring mold for transferring the heated glass sheet under the suction mold as in Kuster '225 in order to provide for an efficient means for moving the heated glass sheet under the bending suction mold. Further regarding claims 4 and 8, Seymour also discloses using a planar ring 102 for moving the sheets toward a stationary vacuum mold and the glass sheet is clearly seen as being planar prior to attraction (see Figs. 16-17). Therefore, it is considered that it would have been obvious to one of ordinary skill in the art that the ring mold of Kuster '225 could have been any shape such as planar or curved shaped with the reasonable expectation of the apparatus shaping the glass sheet on the vacuum mold of Seymour in order to produce a curved glass sheet. Further in this regard it is considered that the shape of the ring mold is an obvious engineering design choice in view of a lack of any unexpected results or criticalities resulting from the ring mold being a planar shaped mold. Regarding claim 6, the sheet of Seymour is bent from the

central region of the sheet to the side areas of the sheet. Regarding claim 7, Seymour discloses using a stretchable fabric covering such as a knit fiber glass fabric on the shaping surfaces to protect surface of the glass sheets (see col. 5, lines 50-55). Regarding claim 9, it is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made that the ring mold would have an open center portion below the central shaping area as it is known that ring molds are open in the center of the mold and as such this defined open center would be have been inherently obvious to any one skilled in the art.

7. Claim 3 is rejected under 35 U.S.C. § 103 as being unpatentable over Seymour in view of McMaster or Seymour in view of Kuster '225 as applied to claims 1, 2, and 4-9 above, and further in view of Nitschke et al. 4,661,141.

Employing different vacuum levels in the chambers would have been obvious as suggested in Nitschke for avoiding negative curvature at the end portions.

Response to Amendment

8. Applicant's arguments filed 10-26-95 have been fully considered but they are not deemed to be persuasive. In response to the argument that McMaster does not disclose using a ring mold and in fact discusses difficulties with there use it is

considered that McMaster clearly contemplates using a ring mold or a full surface mold in col. 2, lines 19-28 wherein McMaster states that glass bending is preformed by both ring molds and full surface molds and then goes on to discuss the advantages that each type of mold provides, nowhere in col. 2, lines 19-28 does McMaster discuss any difficulties with using a ring mold as applicant contends. It is also considered that col. 7, line 31 to col. 8, line 2 doesn't teach against using a ring mold by teaching a curved mold as ring molds can be both curved or planar, further it is considered that mold 42' of McMaster is referring to a well known articulated shaping mold which can come in the shape of rings which would be obvious to one skilled in the art. Regarding the argument that a planar sheet and planar ring mold are not provided by the cited references applicant is referred to the above rejections where this is discussed. Regarding the argument that Kuster '225 does not show a true ring mold it is considered that the mold of Kuster is in the shape of a ring which supports the glass sheet thus it is a ring mold, there is nothing in the instant claims which distinguish it from Kuster '225 and also there is nothing to define the instant ring mold as applicant refers to it as "true" ring mold and in fact it is not understood what would constitute a "true" ring mold, also not that element 109 in Kuster '225 was never referred to in the prior art rejections therefore it is not clear why applicant is

referring to in his arguments, it is clear irrelevant to the issues in the case.

9. The rejection of the claims over Seymour in view of Kuster et al. 5,352,263 has been withdrawn in view of the submission of the certified translation of the foreign priority papers.

Conclusion

10. Japanese 63-27443 has been considered and is listed on the enclosed PTO-892.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven P. Griffin whose telephone number is (703) 308-1164. The examiner can normally be reached on Monday-Thursday from 6:30 AM-4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Czaja, can be reached on (703) 308-3852. The fax phone numbers for this Group are (703) 305-7115, 7718, or 7719.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.

Steven P. Griffin

STEVEN P. GRIFFIN
EXAMINER
ART UNIT 1303
6-24-96

SPG
June 24, 1996